



2019–2020 NTSB

# MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS



## Reduce Fatigue-Related Accidents

### What is the problem?

Driving a truck, bus, or car is a task that requires complex human interaction and a driver's complete attention and proficient skill. All too often, however, drivers are impaired by fatigue stemming from insufficient or poor-quality sleep. Fatigue degrades a person's ability to stay awake, alert, and attentive to the demands of safely controlling a vehicle. Drivers may not recognize the effects of fatigue until it's too late.

Drowsy driving does not leave telltale signs and, as a result, it is widely believed to be underreported on police crash forms. A 2014 study by the AAA Foundation for Traffic Safety used a set of more detailed crash investigations and a statistical technique known as multiple imputation to estimate that about 21 percent of fatal crashes involved a drowsy driver.

Fatigue is often the result of insufficient sleep. But even when individuals have enough time to get rest, other issues—such as medical conditions, unpredictable or inverted work schedules, living environment, and personal choices—can affect their ability to obtain quality sleep. Fatigue is particularly dangerous because it may result in risky behavior, such as poor judgment and decision-making, slowed reaction times, and loss of situational awareness and control.

The traveling public can unknowingly be placed at risk because a fatigued commercial truck or bus operator cannot safely execute his or her duties.

### Related reports:

**HAB-18/01:** Rear-End Crash Involving Truck-Tractor Semitrailer and Sport Utility Vehicle; Goodland, Kansas; June 29, 2016; Accident ID HWY16FH017

**6,400**  
Estimated  
number of fatal  
crashes per  
year involving a  
drowsy driver

Source: AAA Foundation  
for Traffic Safety



**On July 2, 2016, a truck-tractor semitrailer struck a bus after the bus failed to stop at an intersection in St. Marks, Florida, causing the truck to catch fire. Four people died and 30 were injured. We determined that the probable cause of the crash was the bus driver's failure to stop at the intersection due to inattention, likely caused by the effects of fatigue.**

Photo by Florida Highway Patrol

**HAR-17/05:** Agricultural Labor Bus and Truck-Tractor Collision at US-98—SR-363 Intersection Near St. Marks, Florida; July 2, 2016; Accident ID HWY16MH019

**HAR-17/04:** Motorcoach Collision With Combination Vehicle After Traffic Break on Interstate 10; Palm Springs, California; October 23, 2016; Accident ID HWY17MH005

**HAR-17/03:** Motorcoach Run-Off-the-Road and Collision with Vertical Highway Signpost State Route 99; Livingston, California; August 2, 2016; Accident ID HWY16MH020

**HAR-18/03:** Motorcoach Run-Off-the-Road and Overturn US Highway 83; Laredo, Texas; May 14, 2016; Accident ID HWY16MH011

**HAB-16/09:** Passenger Vehicle Median Crossover Crash, Robstown, Texas; March 20, 2016; Accident ID HWY16FH007

**For detailed investigation reports, visit [www.nts.gov](http://www.nts.gov)**

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## What can be done?

Fatigue is a manageable threat to transportation safety that can be mitigated by a combination of science-based regulations, comprehensive fatigue risk management programs, and individual responsibility. We have issued more than 200 safety recommendations addressing fatigue-related problems across all modes of transportation.

**50+**

Highway fatigue-related  
recommendations issued  
by the NTSB between  
1978 and 2018

**To address the problem of fatigue, the following actions should be taken:**

### Operators/Industry

› Establish fatigue risk management programs and continually monitor their success to reduce the risks for personnel performing safety-critical tasks. Fatigue risk management programs take a comprehensive, tailored approach to addressing the problem of fatigue within an industry or workplace. Such programs include policies or practices to address scheduling, attendance, education, medical screening and treatment, personal responsibility during nonwork periods, task and workload issues, rest environments, commuting, and napping.

### Regulators

- › Incorporate scientifically based fatigue mitigation strategies into the hours-of-service regulations for passenger-carrying drivers who operate during the nighttime window of circadian low.
- › Require motor carriers to adopt fatigue management programs based on the North American Fatigue Management Program.
- › Develop and implement a plan to deploy in-vehicle technologies that reduce fatigue-related crashes.
- › Implement a program to identify commercial drivers at high risk for obstructive sleep apnea (OSA) and require that those drivers show evidence that they've been appropriately evaluated and treated

On August 2, 2016, a motorcoach departed the travel lanes, struck a W-beam guardrail, and collided with a 14-inch-diameter vertical highway signpost on State Route 99 in Livingston, California. Four passengers died and 20 were injured. We determined that the probable cause of the crash was driver fatigue resulting from acute sleep loss and circadian factors.

before granting them unrestricted medical certification. Disseminate guidance for commercial drivers, employers, and physicians about identifying and treating OSA.

- › Provide certified medical examiners easy access to the Federal Motor Carrier Administration's 2016 Medical Review Board guidance on OSA.

### Public (Drivers)

- › Get the proper amount of sleep. Recognize that older adults need 7 to 9 hours of sleep per night; teens need 8 to 10 hours for optimal health and safety.
- › Talk to your doctor if you think you may have a health condition or use medicines that affect your alertness. Some medical conditions, such as OSA, insomnia, and restless leg syndrome may interfere with sleep and can lead to fatigue. Certain prescription and over-the-counter medicines can also cause drowsiness.
- › Do not drive beyond the federally mandated hours-of-service limits or when you are sleepy, and take breaks as needed.

**MWL**  
MOST WANTED LIST

Critical changes needed  
to reduce transportation  
accidents, injuries, and  
fatalities

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**NTSB** | National  
Transportation  
Safety Board

The NTSB **MOST WANTED LIST** highlights safety issues identified from the NTSB's accident investigations to increase awareness about the issues and promote recommended safety solutions.

For more information visit [www.ntsb.gov/mostwanted](http://www.ntsb.gov/mostwanted) or contact [SafetyAdvocacy@ntsb.gov](mailto:SafetyAdvocacy@ntsb.gov)

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the federal government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

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